IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Naoaki YAMANAKA, *et al.*

Application No.: 10/774,629   Group No.: 2154

Filed: February 10, 2004   Examiner: KEEFER, Michael E.

Title: PUSH NETWORK HAVING CONTENT IDENTIFYING PACKETS

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
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Dear Sir:

This Appeal is from an Office Action mailed March 13, 2008, rejecting claims 1-11, 14-15, 21, and 25 of the above-identified patent application. This brief is in furtherance of the Notice of Appeal filed June 11, 2008. The Panel Decision from the Pre-Appeal Brief Review, mailed July 10, 2008, indicated that the application remains under appeal because there is at least one issue for appeal.

The Director is authorized to charge the $510.00 fee for filing an Appeal Brief pursuant to 37 C.F.R. § 41.20(b)(2). The Director is further authorized to charge any additional fees that may be due, or credit any overpayment of same to Deposit Account No. 033975 (**Ref. No. 040803-0307870**).

REQUIREMENTS OF 37 C.F.R. §41.37

I. 37 C.F.R. § 41.37(c)(1)(i) – REAL PARTY IN INTEREST

The real party in interest in this appeal is the following party: Nippon Telegraph and Telephone Corporation (Japan), by way of an Assignment recorded February 10, 2004, in the U.S. Patent and Trademark Office at Reel 014983, Frame 0128.

II. 37 C.F.R. § 41.37(c)(1)(ii) – RELATED APPEALS AND INTERFERENCES

Appellants are not aware of any related appeals and/or interferences.

III. 37 C.F.R. § 41.37(c)(1)(iii) – STATUS OF CLAIMS

Pending: Claims 1-11, 14-15, 21, and 25 are pending.

Cancelled: Claims 12-13, 16-20, 22-24, and 26-44 have been cancelled.

Rejected: Claims 1-11, 14-15, 21, and 25 stand rejected.

Allowed: No claims have been allowed.

On Appeal: The rejections of claims 1-11, 14-15, 21, and 25 are appealed.

IV. 37 C.F.R. § 41.37(c)(1)(iv) – STATUS OF AMENDMENTS

An Amendment was filed June 11, 2008, subsequent to the mailing of the Final Office Action on March 13, 2008 (hereafter "Final Action"). This amendment was entered and considered by the Examiner. [*See* Advisory Action mailed June 23, 2008].

V.   37 C.F.R. § 41.37(c)(1)(v) – SUMMARY OF CLAIMED SUBJECT MATTER

The following exemplary citations to the Specification and drawing figures are not exclusive, as other example of support for the claimed subject matter exist. As such, the following citations should not be viewed as limiting.

A.   INDEPENDENT CLAIMS

1.   Independent claim 1

One aspect of Appellants' invention relates to a push network. [*See, e.g.*, Specification, pg. 1, lines 11-18].

One aspect of Appellants' invention comprises means for copying information held in a packet sent from an information providing terminal and for generating a plurality of packets with the same information. [*See* Specification, pg. 20, lines 25-28; Figure 1: item 2 (copying nodes)].

One aspect of Appellants' invention comprises means for distributing the packets thereby generated to a plurality of user terminals. [*See* Specification, pg. 20, line 28 – pg. 21, line 1; Figure 1: item 10 (distribution network)].

One aspect of Appellants' invention comprises means within said information providing terminal for adding information to the packet. [*See* Specification, pg. 20 , lines 25-28; Figure 1: item 7 (information providing terminal supplying "main information")].

One aspect of Appellants' invention comprises means within said information providing terminal for adding to the packet a content identifier or both the content identifier and a category identifier, wherein the information provided by said

information providing terminal is assigned a unique content identifier or both the content identifier and the category identifier for identifying the category to which the content of the information in the packet belongs. [*See* Specification, pg. 21, lines 2-9; Figure 1: item 3 (content ID adder); pg. 41, lines 7-15; Figures 40].

wherein the distributing means comprises means for deciding, in accordance with the content identifier, or in accordance with one or both of the content identifier and category identifier, whether or not to distribute that packet to a given user terminal. [*See* Specification, pg. 21, line 10 - pg. 22, line 12; Figure 1: item 1 (content filter); pg. 41, lines 16-25; Figure 41].

B.   SEPARATELY ARGUED DEPENDENT CLAIMS

1.   Dependent claim 3

One further aspect of Appellants' invention comprises, wherein the decision means includes: a table, provided in correspondence with a destination, in which content identifier related information has been registered, [*See* Specification, pg. 21, lines 10-16; Figure 3: item 4 (table)]; and

means for passing a packet if the content identifier added to that packet matches the content identifier related information registered in the table. [*See* Specification, pg. 21, lines 15-28; Figure 3: item 5 (patch header analyzer)].

2.   Dependent claim 4

One further aspect of Appellants' invention comprises wherein means is provided for registering content identifier related information in the table in

accordance with notification from a user. [*See* Specification, pg. 22, lines 1-22; Figure 4 (notification sent e.g., "content identifier (COI) = 8")].

3.   Dependent claim 5

One further aspect of Appellants' invention comprises wherein means is provided for deleting from the table content identifier related information that has been registered in the table, once a series of packets to which that content identifier has been added have passed. [*See* Specification, pg. 24, line 22- pg. 25, line 2].

4.   Dependent claim 25

One further aspect of Appellants' invention comprises wherein means is provided for adding to a packet one or both of a content identifier, [*See* Specification, pg. 21, lines 2-9; Figure 1: item 3 (content ID adder); pg. 41, lines 7-15; Figures 40], and

a category identifier; and the distributing means comprises means for deciding, in accordance with this content identifier and/or category identifier, whether or not to distribute that packet to a given user terminal. [*See* Specification, pg. 21, line 10 - pg. 22, line 12; Figure 1: item 1 (content filter); pg. 41, lines 16-25; Figure 41].

VI.   37 C.F.R. § 41.37(c)(1)(vi) – GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A.   Claims 1-11, 14, 15, 21 and 25 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,545,982 to Murthy *et al.* ("Murthy") in view of European Patent Application No. EP 0915598 to Bushmitch ("Bushmitch"). [Final Action, pg. 2].

VII.   37 C.F.R. § 41.37(c)(1)(vii) – ARGUMENTS

The rejection of each of claims 1-11, 14, 15, 21 and 25 should be reversed for the reasons set forth herein.

A.   Claims 1-11, 14, 15, 21 and 25 are patentable under 35 U.S.C. § 103(a) over Murthy and Bushmitch

1.   Independent claim 1

In particular, claim 1 recites, inter *alia*, the features of:

> means within said information providing terminal for adding information to the packet;
>
> means within said information providing terminal for adding to the packet a content identifier or both the content identifier and a category identifier; and
>
> wherein the information provided by said information providing terminal is assigned a unique content identifier or both the content identifier and the category identifier for identifying the category to which the content of the information in the packet belongs.

Appellants submit that neither Murthy nor Bushmitch, either alone or in combination, teach or otherwise render obvious *at least* these features. For example, Murthy does not teach or suggest "means within said information

providing terminal for adding information to the packet." However, the Examiner asserts that "[t]he information providing terminal must *inherently* have a means to add information to a packet, or else it would not be able to provide a packet with any information in it at all." [Final Action, pg. 4, *emphasis added*]. Appellants, however, are not merely claiming adding information to any packet. Indeed, claim 1 specifically recites "means *within said information providing terminal* for adding information to the packet." The Examiner has failed to identify any element or feature in Murthy that corresponds to an "information providing terminal." Thus, for at least this reason, the Examiner has failed to identify any "means *within said information providing terminal* for adding information to the packet," in Murthy.

Moreover, Appellants point out that "[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic <u>necessarily</u> flows from the teachings of the applied prior art." *Ex parte Levy,* 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). The Examiner, however, has not shown that that "means *within said information providing terminal* for adding information to the packet," are <u>necessarily</u> provided in Murthy. For example, Murthy suggests that packets may arrive at the bridge from its ports <u>or</u> management packets may be internally generated in the bridge. [*See, e.g.,* Murthy, col. 16, lines 57-59]. Thus, the Examiner has not established, with any certainty, which packets of Murthy are necessarily provided from an information providing terminal.

Further, the relied-upon portions of Murthy do not teach or suggest "means within said information providing terminal for adding to the packet a content identifier or both the content identifier and a category identifier." As pointed out above, the Examiner has failed to identify any element or feature in Murthy that corresponds to an "information providing terminal." For at least this reason, the Examiner has failed to show that Murthy teaches "means **within said information providing terminal for adding information to the packet.**"

The Examiner then alleges that Murthy teaches that the protocol ID, address, length field, CRC, and various packet headers in Murthy correspond to a "content ID." [*See* Final Action; pg. 3]. However, in contrast to the claim language, none of these features are related *to a category or a content of the information* <u>in the packet</u>. Indeed, claim 1 further recites that "...the information provided by said information providing terminal is assigned a **unique content identifier or both the content identifier and the category identifier for <u>identifying the category to which the content of the information in the packet belongs.</u>**"

Appellants point out that with the exception of data field 17 of packet 13, the various other fields of the packet only relate to aspects of packet transmission and not to the content of any information provided in the packet. [*See, e.g.*, Murthy, col. 5, lines 4-14; FIG. 2]. And, data field 17 contains subfields to further specify the route, i.e., hop counts, control options, length type etc. – but nothing suggesting the identification of categories to which information content belongs. [*See* Murthy, col. 9, lines 40-45]. Further, the Packet Descriptor 49 and XMASK 55 of Murthy, which the Examiner also alleges correspond to a "content ID", do not appear to be part of any

packet either. [*See* Murthy, col. 10, lines 59-67; col. 11, lines 20-30]. Murthy merely teaches that these features are used to "… handle packets indirectly." [Murthy, col. 10, lines 60-61].

Further, even assuming *arguendo* that it was legally proper to combine the teachings of Murthy and Bushmitch (which Appellants do not concede), the relied-upon portions of Bushmitch do not overcome the deficiencies of Murthy. Namely, the Examiner asserts that Bushmitch allegedly "teaches a push network and admission control of devices registering with service providers." [Final Action, pg. 3]. However, the relied-upon portions of Bushmitch do not teach or suggest "*means within said information providing terminal for* adding information to the packet;" <u>and</u> "*means within said information providing terminal for* adding to the packet a content identifier or both the content identifier and a category identifier," as recited in claim 1.

An aspect of Appellants' claimed invention is that a content identifier, or both a content identifier and a category identifier, is/are added to the packet in the information providing terminal, along with information within the packet, so as to distribute the packets in accordance with the content/category identifiers. [*See, e.g.*, Appellants' Specification, pg. 21, lines 2-9; FIG. 1].

In striking contrast, Murthy teaches distributing packets by parsing the information contained in the data field 17. Specifically, Murthy discloses:

> When a packet arrives at a router, the Data field 17 is parsed and examined. Specific protocols are defined for each type of packet to be routed and are indicated by sub-fields in the packet Data field 17. One of the sub-fields may be a network address which is a logical, rather than a physical, address indicating the ultimate destination of the packet.

[Murthy, col. 9, lines 31-34].

Artisans of ordinary skill will readily appreciate that Murthy's teachings provide a much more laborious process – not to mention that it does not rely upon a content identifier, or both a content identifier and a category identifier to the packet to distribute the packets, as required by claim 1.

Bushmitch also fails to teach this aspect of Appellants' claimed invention. Rather, Bushmitch teaches splitting video and audio streams into substreams, which are separately coded and transmitted over the network independently and later reconstructed by a multimedia client . [*See, e.g.*, Buchmitch, ¶ 13].

Accordingly, Appellants submit that the cited portions of Murthy, Bushmitch, or a proper combination thereof, fail to disclose or render obvious each and every element recited by claim 1. Thus, the rejection of claim 1 is improper and should be withdrawn.

2.   Dependent claims 2-11, 14, 15, 21 and 25

Claims 2-11, 14, 15, 21 and 25 depend from claim 1, and are patentable for at least the same reasons provided above related to claim 1 and for the additional features recited therein.

a.   *Dependent claim 3*

Dependent claim 3 recites, inter *alia*, the features of:

wherein the decision means includes:

a table, provided in correspondence with a
destination, in which content identifier related information
has been registered; and

means for passing a packet if the content identifier
added to that packet matches the content identifier related
information registered in the table.

The Examiner alleges that Murthy discloses "... tables (e.g., B/M table col. 15)

..." [Final Action, pg. 3]. The rejection is improper for at least the reason that the

Examiner has mischaracterized Murthy.

Figure 13 of Murthy shows the Broadcast/Multicast Table 81, which the

Examiner refers to. For example, Murthy discloses:

When a received packet indicates a Broadcast or Multicast
address (that is when the Broadcast/Multicast flag 21 is set),
the Broadcast/Multicast Table 81 is used in place of the
Forwarding Table 80 to develop XMASK 55. The
Broadcast/Multicast Table 81 is a one dimensional array
indexed by RPORT 85. Each array entry is an XMASK value
55. FIG. 13 illustrates a Broadcast/Multicast Table 81 in
which all ports are allowed to communicate with one
another, except for Port 4, the monitoring port of the
example. Therefore, each entry will have a 1 in each
XMASK 55 bit position except for bit 4 (the monitoring port)
and the bit corresponding to RPORT (thereby preventing
broadcast to the source port).

[Murthy, col. 15, lines 4-16].

Based on the foregoing passage, table 81 of Murthy routes packets according

to port assignments. Clearly, there is no teaching or suggestion of a table, provided

in correspondence with a destination, in which *content identifier related information*

has been registered, much less means for passing a packet *if the content identifier*

added to that packet matches the content identifier related information registered in

the table.

For at least the foregoing reasons, the rejection of claim 3 is improper and should be withdrawn. Claims 4-11, 14 and 15 depend from claim 3, and are patentable for at least the same reasons provided above related to claim 3, and for the additional features recited therein.

    c. *Dependent claim 4*

Dependent claim 4 recites, inter *alia*, the features of:

> wherein means is provided for registering content identifier related information in the table in accordance with notification from a user.

The Examiner alleges that Murthy discloses "… registering a content ID (using tables, col. 14), table entries with notification from the user …" [Final Action, pg. 3]. The rejection is improper for at least the reason that the Examiner has mischaracterized Murthy.

Appellants note that column 14 of Murthy discloses multiple tables, including: Bridging Table 25, Forwarding Table 80, Broadcast/Multicast Table 81, and Bridging Table 82. [*See, e.g.*, Murthy, col. 14, lines 37-42]. Since claim 4 depends from claim 3, Appellants presume that the Examiner intended to rely on same table of Murthy relied upon in the rejection of claim 3 (i.e., Broadcast/Multicast Table 81), even though not explicitly stated.

Murthy, however, discloses that the values in the Broadcast/Multicast Table 81 are defined by a network administrator. [*See, e.g.*, Murthy, col. 15, lines 18-22]. Accordingly, Murthy fails to teach registering content identifier related information in the table in accordance *with notification from a user.*

For at least the foregoing reasons, the rejection of claim 4 is improper and should be withdrawn. Claims 14 and 15 depend from claim 4, and are patentable for at least the same reasons provided above related to claim 4, and for the additional features recited therein.

d.   *Dependent claim 5*

Dependent claim 5 recites, inter *alia*, the features of:

> wherein means is provided for deleting from the table content identifier related information that has been registered in the table, once a series of packets to which that content identifier has been added have passed.

The Examiner alleges that Murthy discloses "... deleting means (e.g., XMASKs, col. 13, lines 6-46; custom filtering rules, col. 14, table entries, col. 16, lines 16-45) ... [Final Action, pg. 3]. The rejection is improper for at least the reason that the Examiner has mischaracterized Murthy.

For example, none of the cited portions of Murthy teach or suggest the claimed content identifier, much less deleting *content identifier related information* from a table. Rather, Murthy discloses that "XMASK 55 is simply a bit vector in which each bit indicates a port 3 to which the packet 13 is to be dispatched." [Murthy, col. 11, lines 12-15].

For at least the foregoing reasons, the rejection of claim 5 is improper and should be withdrawn. Claim 6 depends from claim 3, and is patentable for at least the same reasons provided above related to claim 3, and for the additional features recited therein.

e.   *Dependent claim 25*

Dependent claim 25 recites, inter *alia*, the features of:

> wherein means is provided for adding to a packet one or both of a content identifier and a category identifier; and the distributing means comprises means for deciding, in accordance with this content identifier and/or category identifier, whether or not to distribute that packet to a given user terminal.

The Examiner has not shown how the alleged combination of Murthy and Bushmitch teaches or renders obvious *both a content identifier <u>and</u> a category identifier*. Indeed, the Final Action is silent with regard to a category identifier and merely alleged "...adding a content ID..." [Final Action, pg. 3]. To be sure, "[a]ll words in a claim <u>must</u> be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970) (*emphasis added*).

Moreover, as discussed above, neither the cited portions of Murthy nor Bushmitch teach or otherwise render obvious means within said information providing terminal for adding to the packet a content identifier, much less means for adding to the packet both a content identifier and a category identifier.

For at least the foregoing reasons, the rejection of claim 25 is improper and should be withdrawn.

* * *

For *at least* the foregoing reasons, Appellants respectfully request that the rejections of claims 1-11, 14, 15, 21 and 25 under 35 U.S.C. § 103(a) over Murthy in view of Bushmitch should be withdrawn and the claims be allowed.

VIII.   37 C.F.R. § 41.37(c)(1)(viii) - CLAIMS APPENDIX

Appendix A: The pending claims (claims 1-11, 14-15, 21, and 25) are attached in Appendix A.

IX.   37 C.F.R. § 41.37(c)(1)(ix) - EVIDENCE APPENDIX

Appendix B: (None)

X.   37 C.F.R. § 41.37(c)(1)(x) - RELATED PROCEEDINGS INDEX

Appendix C: (None)

CONCLUSION

For at least the foregoing reasons, Appellant respectfully requests that the rejection of each of pending claims 1-11, 14-15, 21, and 25 be reversed.

Respectfully submitted,

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<u>APPENDIX A</u>

<u>CLAIMS</u>

1.   (Previously Presented) A push network comprising:

means for copying information held in a packet sent from an information providing terminal and for generating a plurality of packets with the same information,

means for distributing the packets thereby generated to a plurality of user terminals; wherein:

means within said information providing terminal for adding information to the packet;

means within said information providing terminal for adding to the packet a content identifier or both the content identifier and a category identifier;

wherein the information provided by said information providing terminal is assigned a unique content identifier or both the content identifier and the category identifier for identifying the category to which the content of the information in the packet belongs; and

wherein the distributing means comprises means for deciding, in accordance with the content identifier, or in accordance with one or both of the content identifier and category identifier, whether or not to distribute that packet to a given user terminal.

2.   (Original) A push network as claimed in Claim 1, wherein means is provided for adding a content identifier to a packet, and the distributing means

comprises means for deciding, in accordance with the content identifier, whether or not to distribute that packet to a given user terminal.

3.   (Original) A push network as claimed in Claim 2, wherein the decision means includes:

a table, provided in correspondence with a destination, in which content identifier related information has been registered; and

means for passing a packet if the content identifier added to that packet matches the content identifier related information registered in the table.

4.   (Original) A push network as claimed in Claim 3, wherein means is provided for registering content identifier related information in the table in accordance with notification from a user.

5.   (Original) A push network as claimed in Claim 3, wherein means is provided for deleting from the table content identifier related information that has been registered in the table, once a series of packets to which that content identifier has been added have passed.

6.   (Original) A push network as claimed in Claim 5, wherein the deleting means comprises means for deleting content identifier related information from the table after a prescribed time interval has elapsed after the series of packets have passed.

7.   (Original) A push network as claimed in Claim 3, wherein means is provided for deleting from the table, at a predetermined time, content identifier related information registered in the table.

8.   (Original) A push network as claimed in Claim 3, wherein the decision means comprises means for receiving a packet requesting deletion of content identifier related information, and for deleting the corresponding content identifier related information from the table.

9.   (Original) A push network as claimed in Claim 8, wherein the user terminal comprises means for transmitting a packet requesting deletion of content identifier related information.

10.   (Original) A push network as claimed in Claim 8, wherein the information providing terminal comprises means for transmitting a packet requesting deletion of content identifier related information.

11.   (Original) A push network as claimed in Claim 3, wherein the decision means comprises means which, if no packet having the same content identifier as that of passed packets arrives within a fixed time interval after the final packet has passed, deletes from the table the information relating to that content identifier.

12-13. (Cancelled)

14.   (Original) A push network as claimed in Claim 4, wherein the registering means comprises means for receiving a request packet in which has been written a content identifier relating to content desired by a user, and means for registering content identifier related information in the aforementioned table in accordance with the content identifier written in the request packet received by this receiving means.

15.   (Original) A push network as claimed in Claim 4, wherein one registering means is provided for a plurality of decision means, and this registering means comprises: means for storing, in correspondence with content, information indicative of the information providing terminal constituting the source of packets with that content; means for searching for a route from that information providing terminal to a given user terminal in accordance with the stored contents of this storage means; and means which, in accordance with the result of the search conducted by this searching means, registers content identifier related information notified by a user, in the tables of the decision means along the route in question.

16-20. (Cancelled)

21.   (Original) A push network as claimed in Claim 1, wherein means is provided for temporarily storing a packet which the decision means has decided to distribute.

22-24. (Cancelled)

25.   (Original) A push network as claimed in Claim 1, wherein means is provided for adding to a packet one or both of a content identifier and a category identifier; and the distributing means comprises means for deciding, in accordance with this content identifier and/or category identifier, whether or not to distribute that packet to a given user terminal.

26-44. (Cancelled)

APPENDIX B

EVIDENCE APPENDIX

NONE

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APPENDIX C

RELATED PROCEEDINGS INDEX

NONE